

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A machine for conveying a carton having a first end and a second end and including a lid having at least one flap adjacent the first end of the carton along a conveying path in a first, substantially horizontal plane, comprising:

a support surface for supporting the carton during movement along the conveying path;

an overhead conveyor positioned above a first portion of the support surface, said overhead conveyor conveying [[including]] at least one first lug selectively movable from a retracted position above the support surface to a depending position along a forward run of the overhead conveyor and in the conveying path, said lug in the depending position being arranged for engaging the first end of the carton adjacent the at least one flap and conveying the carton from an infeed end of the overhead conveyor in a first direction along the [[path]] support surface in the first plane to an outfeed end of the overhead conveyor;

a takeaway conveyor positioned adjacent a second portion of the support surface and the outfeed end of the overhead conveyor for conveying at least one second lug selectively movable from a retracted position below the support surface to an upstanding position along a forward run of the takeaway conveyor and in the conveying path, said second lug in the upstanding position being arranged for engaging the second end of the carton received from the outfeed end of the overhead conveyor and conveying the carton in a second direction along the [[path]] support surface in the first plane, said second direction being generally perpendicular to the first direction; and

means for folding the at least one flap while the carton is conveyed along the path by the takeaway conveyor.

2. (Currently Amended) The machine according to claim 1, wherein the first lug is pivotally mounted to a conveyor chain for moving between [[a]] the retracted position overlying the [[conveying path]] support surface and the depending position.

3. (Previously Presented) The machine according to claim 1, wherein the takeaway conveyor includes a pair of generally parallel conveyor chains, each including at least one second lug, wherein

each at least one second lug is pivotally mounted to the corresponding conveyor chain.

4. (Original) The machine according to claim 3, wherein each second lug is a pop-up lug movable between a retracted position below the conveying path and an upstanding position.

5. (Previously Presented) The machine according to claim 1, further including a rotatable wheel having at least one radially extending projection for at least partially closing the at least one flap before or during the engagement of the carton by the depending lug of the overhead conveyor.

6. (Previously Presented) The machine according to claim 1, wherein the means for folding the at least one flap includes a first stationary plow and at least one roller wheel for completing the folding in association with the plow.

7.-8. (Cancelled)

9. (Original) The machine according to claim 1, further including means for applying or activating an adhesive for sealing the at least one flap.

10. (Withdrawn) A machine for conveying a carton and at least partially folding a flap associated with a trailing end of the carton, comprising:

- a rotatable wheel having at least one radially extending projection for engaging and at least partially folding the flap;

- an overhead conveyor including at least one lug selectively movable to a depending position for engaging the trailing end of the carton once the flap is at least partially folded by the projection and conveying the carton in a conveying direction,

- a takeaway conveyor adjacent to the overhead conveyor conveying at least one second lug selectively movable to a position for engaging and conveying the carton in a second direction along the path, said second direction being generally perpendicular to the first direction; and

- means for folding the at least one flap while the carton is conveyed along the path by

the takeaway conveyor;

whereby the partial folding by the wheel helps to prevent the flap from being damaged by the depending lug.

11. (Withdrawn) The machine according to claim 10, wherein the overhead conveyor includes a pair of parallel conveyor chains, each carrying a plurality of lugs independently and selectively movable to the depending position.

12. (Withdrawn) The machine according to claim 11, wherein the plurality of lugs associated with each chain overlap with each other in the conveying direction.

13. (Withdrawn) The machine according to claim 10, wherein the rotatable wheel includes a plurality of radially-extending projections.

14. (Withdrawn) The machine according to claim 10, further including a sensor for sensing the location of the carton and generating a signal used to actuate the wheel to rotate and move the projection into engagement with the flap.

15. (Withdrawn) The machine according to claim 10, further including a support surface along which the carton is conveyed by the overhead conveyor.

16.-18. (Cancelled)

19. (Withdrawn) The machine according to claim 10, further including an infeed conveyor for feeding randomly received cartons to the overhead conveyor at a substantially constant speed.

20.-95. (Cancelled)

96.-105. (Cancelled)

106. (Previously Presented) The machine according to claim 1, wherein a portion of the overhead conveyor overlies a portion of the takeaway conveyor.

107. (Currently Amended) An apparatus for conveying a carton including a lid having at least one flap, comprising:

a conveyor assembly including a support surface for supporting the carton and creating a conveying path having an L-shape in plan view, said conveyor assembly comprising an overhead conveyor overlies a first leg of the L-shaped conveying path portion of the support surface extending in a first direction and including at least one first lug mounted to a first endless chain for selectively pivoting relative to the first endless chain from a retracted position above the support surface to a depending position in the conveying path for engaging a first end of the carton and conveying the carton along the first leg of the L-shaped path from an infeed end of the overhead conveyor to an outfeed end thereof, and a takeaway conveyor adjacent a second portion of the support surface and the outfeed end of the overhead conveyor for conveying at least one second lug mounted to a second endless chain for selectively pivoting relative to the second endless chain from a retracted position to an upstanding position for engaging and conveying the carton conveyed by the at least one first lug of the overhead conveyor to the outfeed end of the overhead conveyor in a second [[leg of the path]] direction along the second portion of the support surface, said second direction being generally perpendicular to the first [[leg of the L-shaped path]] direction; and

a folder for folding the at least one flap while the carton is conveyed.

108. (Currently Amended) The apparatus of claim 107, wherein the overhead conveyor at least partially overlies the second leg of the L-shaped conveying path portion of the support surface.

109. (Currently Amended) An apparatus for conveying a carton including a lid having at least one flap, comprising:

means for providing a conveying path having an L-shape in plan view a support

surface for supporting the carton and creating a conveying path having an L-shape in plan view by including a first portion extending in a direction generally perpendicular to a second portion;

means for conveying the carton along [[a]] the first [[leg of the L-shaped path]] portion of the support surface from a first end of the first portion of the support surface to a second end of the support surface;

means for conveying the carton to the second end of the first portion of the support surface along [[a]] the second [[leg of the L-shaped path]] portion of the support surface, said means for conveying along the first [[leg of the L-shaped path]] portion of the support surface at least partially overlying the second [[leg of the L-shaped path]] portion of the support surface; and

means for folding the at least one flap while the carton is conveyed.

110. (Cancelled)

111. (Previously Presented) The apparatus of claim 109, wherein the means for conveying the carton along the first [[leg of the L-shaped path]] portion of the support surface comprises an overhead conveyor.

112. (Previously Presented) The apparatus of claim 109, wherein the means for conveying the carton along the second [[leg of the L-shaped path]] portion of the support surface comprises a takeaway conveyor.

113. (New Claim) A machine for conveying a carton including a lid having at least first and second flaps along a conveying path in a first, substantially horizontal plane, comprising:

a support surface for supporting the carton during movement along the conveying path;

an overhead conveyor overlying a first portion of the support surface, said overhead conveyor including at least one first lug selectively movable from a retracted position to a depending position for engaging and conveying the carton in a first direction along the support surface;

a takeaway conveyor adjacent a second portion of the support surface for conveying

at least one second lug selectively movable from a retracted position to an upstanding position for engaging and conveying the carton in a second direction along the path, said second direction being generally perpendicular to the first direction; and

a first folder for folding at least the first flap while the carton is conveyed along the first portion of the support surface by the overhead conveyor; and

a second folder for folding at least the first flap while the carton is conveyed along the second portion of the support surface by the takeaway conveyor.